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G-000-102.88

**FACILITY: U.S. DOE-FEMP
NOTICE OF DEFICIENCY C/TA1
OHIO ID: OH 6890008976**

07/29/92

**OEPA/DOE-FN
3
LETTER**



State of Ohio Environmental Protection Agency

Southwest District Office

40 South Main Street
Dayton, Ohio 45402-2086
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George V. Voinovich
Governor

CERTIFIED MAIL

**FACILITY: U.S. DOE-FEMP
NOTICE OF DEFICIENCY C/TA1
OHIO ID: OH 6890008976**

July 29, 1992

Mr. R. E. Tiller, Manager
Fernald Office
U.S. DOE-FEMP
P.O. Box 398705
Cincinnati, Ohio 45239-8705

Dear Mr. Tiller:

Thank you for your November 1, 1991 submittal of the U.S. Department of Energy Fernald Environmental Management Project (U.S. DOE-FEMP) RCRA Part B Permit Application for storage of hazardous wastes.

The Ohio EPA, Division of Hazardous Waste Management (DHWM) has conducted a completeness/technical adequacy review of your Part B permit application and has determined it to be incomplete and technically inadequate. This application has been reviewed pursuant to the rules published in the Hazardous Waste Facility Standards Chapters in the Ohio Administrative Code and the corresponding Federal regulations.

We have enclosed completeness comments and technical adequacy comments that are the result of this review. Please provide detailed information addressing all areas indicated on the comment sheets to Ohio EPA within 55 days of the date of receipt of this correspondence. This submission shall be in accordance with the following editorial protocol:

1. Old language is overstruck.
2. New language is capitalized.
3. Page headers should indicate date of submission.
4. If significant changes are necessary, pages should be renumbered, table of contents revised, and complete sections provided as required.

Mr. R. E. Tiller
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Please send one copy each to:

Tom Crepeau
Ohio EPA, DHWM
Data Management Section
1800 WaterMark Drive
P.O. Box 1049
Columbus, Ohio 43266-0149

Joel Morbito
RCRA Activities
Part B Permit Application
U.S. EPA, Region V, HRM-7J
77 West Jackson Boulevard
Chicago, Illinois 60604


Please send two copies to:

Phil Harris
Ohio EPA, Southwest District Office
40 South Main Street
Dayton, Ohio 45402

Failure to submit a complete permit application or to correct deficiencies in the application may result in the following:
1) denial of the permit application; 2) referral of the matter to the Ohio Attorney General's Office for appropriate enforcement action.

We request that the facility contact Phil Harris of the Southwest District Office at (513) 285-6357 within ten (10) days of receipt of this NOD to discuss each of the enclosed comments in order to make clear the information being requested. This can be accomplished by a conference call. Any questions concerning the review of this permit application and the level of detail expected should be addressed to Mr. Harris.

Sincerely,


Harold O'Connell
Division of Hazardous Waste Management

Enclosure: As Stated

cc w/encl.:

Tehmton Toorkey, CO, DHWM
Tom Crepeau, CO, DHWM, DMS
Phil Harris, SWDO, DHWM

Mr. R. E. Tiller
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cc w/o encl.:

Joel Morbito, USEPA
Graham Mitchell, SWDO

PART B REVIEW COMMENTS
U.S. DOE-FEMP
OH 6890008976

COMPLETENESS COMMENTS

A. PART A APPLICATION CHECKLIST

1. A Part A Application:

OAC 3745-50-43(A)(3); 3745-50-43(A)(5);

- a. The Part A Application has not been signed by the owner and/or facility operator. Submit a signed copy of page 7 of EPA Form 8700-23.
- b. Provide a photograph of the CP Storage Warehouse (Bldg. 56). This photograph was missing from the set of HWMU photographs included with the Part A Application.
- c. The reproduced copies of Item XVI of the Part A Application are not legible. Provide legible copies of this section.

B. FACILITY DESCRIPTION CHECKLIST

General Comments:

- a. The permit application requires clarification with respect to the issue of on-site vs. off-site facility operations. Statements within section B-1 of the application do not accurately describe the scope of future hazardous waste activity at the facility. Examples are;
 - "The FEMP is seeking a permit for on-site container storage units. The units are to be used for the storage of hazardous waste generated when the facility was in production and for the storage of currently generated hazardous waste."
 - "Hazardous waste generated by other DOE programs has been and may be received and stored at the FEMP."
 - "...the FEMP's primary function officially changed from uranium metal production to environmental restoration and site clean-up activities."

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The application is quite vague concerning specific information on the subject of waste acceptance from other DOE programs. In addition, during recent DOE/OEPA meetings, DOE representatives have verbally indicated that the FEMP facility would not be accepting future DOE waste shipments for storage. Given the present lack of sufficient mixed waste treatment capacity, and in light of site contamination concerns and CERCLA activity, this decision is critical to the hazardous waste permitting process. It is advisable that DOE respond directly to this issue.

- b. U.S. DOE-FEMP has applied for a permit to store hazardous waste, and the application addresses these (active) RCRA storage units. There are several additional land based units (in wastewater treatment) which the facility has identified as HWMU's, but is not seeking to permit. These units are necessary for facility operations and will remain active throughout portions of the CERCLA process. The facility is investigating the applicability of the wastewater treatment exemption with regard to these units. The RCRA status of these units is yet to be determined.

2. B-1 General Description:
OAC 3745-50-44(A)(1);

- a. The Consent Decree between U.S. DOE-FEMP and OEPA is referenced throughout the application. Include a summary of the Consent Decree as it applies to storage of hazardous waste at the facility.
- b. This section states that hazardous waste from other DOE programs, (or from "off-site") may be received and stored at the FEMP. Expand information on this subject to include off-site waste types and the amount of waste anticipated on an annual basis. (Please note Section B general comment).
- c. Describe in general terms, the operational processes and waste streams which generated hazardous waste now in storage at the FEMP.

3. B-4 Traffic Information:
OAC 3745-50-44(10);

Identify on Figure B-8, the primary and secondary access points referred to on page B-10. Also identify the location of the third, currently unused, entrance point.

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C. WASTE CHARACTERISTICS CHECKLIST

General Comments:

- a. This section is very general and could benefit from improved organization. The text does not provide a clear description of the procedures to be used to meet the required (and stated) objectives of the waste analysis plan.
4. C-1 Chemical and physical analyses:
OAC 3745-50-44(A)(2); 3745-54-13(A);
 - a. The text infers that the Waste Determination Plan is the primary facility guidance document for the waste characterization process. This document should be included as an attachment to the permit application.
 - b. The last paragraph of section C-1 states that "Table C-1 identifies the hazardous wastes stored at the FEMP ... Table C-2 summarizes the results of the hazardous waste determinations that have been completed at the FEMP based on analytical data or process knowledge." It is not clear how these two tables relate to each other. Table C-1 contains an alphabetical listing of wastes (under the heading of "Waste Name") which have been identified as hazardous. This list does not correspond with the listing of apparent waste streams (under the heading "Waste Description") identified in Table C-2. Please provide additional information to clarify the relationship between these two tables.
 - c. Table C-2 associates "Sample Plans" with "Waste Descriptions", and begins with Sample Plan #19. Various numerical Sample Plans are associated with specific Waste Descriptions. Please explain the waste determination process in terms of the information presented in Table C-2, in greater detail.
 - d. Table C-1 or C-2 should show what analysis was conducted for each waste/waste stream in order to make a hazardous determination.
 - e. Within Table C-1, indicate those waste streams that are routinely generated by the facility (as opposed to wastes stored as a result of production activities and CERCLA remediation).
 - f. As part of the permit application, include Consent Decree waste determination compliance schedules.

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C-2 Waste Analysis Plan:

5. C-2b Test methods:
OAC 3745-54-13(B)(2);

Within Section C-2b, describe what audit methods DOE-FEMP will employ to provide assurance that off-site laboratory QA/QC goals, as established in SW-846, are being met.

6. C-2c Sampling methods:
OAC 3745-54-13(B)(3);

Briefly describe the actual chain-of-custody procedure employed by DOE-FEMP, as outlined on page C-17, and include a sample chain-of-custody form.

D. PROCESS INFORMATION CHECKLIST

General Comments:

- a. The organizational format of this section is confusing. Rather than document the required information in Part B application format, for each storage area, it might be clearer to provide information on all the storage units, under a common Part B format heading. This decision is left to the discretion of U.S. DOE-FEMP.
- b. Information for each container storage area begins with a "general description" which includes the maximum storage capacity in gallons and 55-gallon drum equivalents. Include information which will indicate the current quantity of waste in each container storage area. This can be estimated and expressed as a percentage of the maximum capacity. If projections are available as to when maximum capacity will be attained, include this information as well.
- c. Correct the ambiguity existing between the statement in section D-1a of the permit application which states that "Containers with free liquids may be stored in the Plant 1 Pad structures which will be constructed with secondary containment systems. The remaining portion of the Plant 1 Pad will be used for storage of containers without free liquids."; and the statement in section D-1b of the permit application which states that "The Plant 1 Pad will be used primarily for storage of containers without free liquids after completion of the upgrade activities."

D-1 Containers:

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D-1a Containers with free liquids:

7. D-1a(1) Description of containers:
OAC 3745-55-71; 3745-55-72;

- a. Provide a description of the DOT specifications for containers referenced for the Plant 1 Pad, KC-2 Warehouse, Plant 9 Warehouse, and Plant 6 Warehouse. In addition, explain the reference to "DOT equivalent" containers, and provide specifications.
- b. Indicate construction materials used for containers (eg. whether steel, plastic, etc.) and whether new, used, or reconditioned. Also provide information on container liners used in standard operating procedures for containerizing waste.

8. D-1a(2) Container Management Practices:
OAC 3745-55-73;

- a. Elaborate on the information provided relating to container transport. Describe the "various equipment used to transport containers throughout the facility." The application states that "containers moved by truck or trailer are loaded and unloaded by forklift." Is this the only routine method of transport? What other methods are employed for this operation?
- b. This section indicates that containers are inspected prior to transport, and are then "transported to the storage unit once safe conditions for movement are verified." What control measures ensure that the pre-transport inspection/safe condition verification procedures are consistently maintained?
- c. Indicate the aisle space maintained (in accordance with the Consent Decree and its proposed amendments) on the Plant 1 Pad.
- d. Specify the container stacking height maintained at each storage unit.

9. D-1a(3)(a) Requirement for the base or liner to contain liquids: OAC 3745-55-75(B)(1);

- a. Elaborate on those procedures utilized to detect and repair cracks or gaps in the base. Identify inspection frequency and criteria utilized to determine if a repair is necessary.

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- b. This section states that the container storage unit bases are scheduled for re-coating. Identify the time-frame when base re-coating is to be accomplished. In addition, for each storage unit demonstrate that current base coatings are compatible with the waste.

10. D-1a(3)(c) Containment System Capacity:
OAC 3745-50-44(C)(1)(a)(iii); OAC 3745-55-75(B)(3);

Demonstrate that the referenced secondary containment capacities reflect volumes displaced by containers, pallets, and other structures in the containment system. (Attachment D-2 indicates that the total displacement per pallet is 3 cubic feet, however, it is not clear that the containment capacities account for displacement).

D-1b Containers Without Free Liquids:

11. D-1b(1) Test for Free Liquids:
OAC 3745-50-44(C)(1)(b)(i);

Stipulate that wastes stored in these container storage units do not contain free liquids, and identify the test procedure or other documentation or information to show that wastes placed in these storage areas do not contain free liquids.

12. D-1b(2) Description of Containers:
OAC 3745-55-71; 3745-55-72;

- a. Same as Comment #8 a., for the additional storage units.
b. Same as Comment #8 b., for the additional storage units.

13. D-1b(3) Container Management Practices:
OAC 3745-55-73;

- a. Same as Comment #9 a.
b. Same as Comment #9 b.

E. GROUNDWATER MONITORING

General Comments:

As the permit application indicates, the facility groundwater monitoring plan for land based units has been submitted in accordance with the Consent Decree and its proposed amendments. Once this plan becomes finalized, it will become an element of the Part B permit application.

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F. PROCEDURES TO PREVENT HAZARDS CHECKLIST

General Comments:

14. F-2a General Inspection Requirements:

OAC 3745-50-44(A)(5); 3745-54-15; 3745-54-33;

This section refers to Attachments F-2 and F-3 for examples of Inspection Log Forms currently in use. Attachment F-3 (Inspection Logs) lists six container storage areas. The seventh container storage area (CP Storage Warehouse) is missing from the list. Additionally, Attachment F-3 does not contain examples of inspection logs for the CP Storage Warehouse. Please make the appropriate additions to Attachment F-3 to correct this oversight.

15. F-2b(1) Container Inspection:

OAC 3745-50-44(A)(5); 3745-54-15(B)(4); 3745-55-74;

Paragraph two in this section refers to Attachment F-3 for examples of Area Inspection Logs (for RCRA storage areas). Please clarify whether the "Area Inspection Log" is the same as the "Inspection Log Form" mentioned in section F-2a, which also references Attachment F-3. If the logs are the same, please identify them with the same name in the text; if they are not, include an example of the Area Inspection Log in Attachment F-3.

16. F-3a(3) Emergency Equipment:

OAC 3745-50-44(A); 3745-54-32(C);

Information under "Fire Control Equipment", (p. F-14) states that "buildings storing ignitable hazardous waste are protected with a sprinkler system ..." Please clarify this statement to indicate if all of the container storage buildings storing ignitable waste are equipped with sprinkler systems. If the covered structures on the Plant 1 Pad are designated for storage of ignitable waste, indicate if they are equipped with sprinkler systems.

17. F-5b General Precautions for Handling Ignitable or Reactive Waste and Mixing of Incompatible Waste:

OAC 3745-50-44(A)(9); 3745-54-17(B);

This section of the permit application indicates that some containers are equipped with pressure relief devices. Expand the discussion of this subject to include information on criteria for selecting containers or waste

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types for the device and the scope of the installation program.

G. CONTINGENCY PLAN CHECKLIST

General Comments:

- a. In accordance with regulations governing the hazardous waste permit process, a facility must demonstrate the development of adequate procedural controls designed to protect the environment and the public health in the event of a release of hazardous waste. Operational controls developed as "Procedures to Prevent Hazards" are designed to detect and prevent expected threats resulting from hazardous waste activity. The contingency plan however, must be a management system designed to respond to un-expected and catastrophic events which could impact facility operations.

It is recognized that U.S. DOE-FEMP operates management safety systems designed for such events, however, the contingency plan should better reflect the framework of planning necessary to effectively prepare for emergencies of this scale. In response to information required under section G-4i, ("Container Spills and Leakage; page G-25 of the permit application) U.S. DOE-FEMP states that "Very large spills involving hazardous waste are unlikely. If an "unlikely" event does occur, and results in a large magnitude spill, how will the facility respond? Section G-4g of the application, ("Incompatible Wastes; page G-24) indicates that container markings and storage inventory records are control measures designed to prevent incompatibility problems in emergency-affected areas. If container markings are obliterated, and record systems unavailable, how will the facility respond?

It is suggested that the facility review, and where appropriate, revise information in this section in order to document a larger view of emergency preparedness.

- b. This section is formatted to provide some information on units outside the scope of the stated permit application, (eg. tanks, surface impoundments; Sections G-4j, G-4k). Elsewhere in the application U.S. DOE has indicated that information on these units is non-applicable, (ie. the facility is not seeking to permit the units). Please explain the reasons to include information on these units within the contingency plan.

18. G-1 General Information:

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OAC 3745-50-44(A)(7); 3745-54-52;

The contingency plan does not provide a sufficient description of facility operations. Expand the narrative with a brief description of the types of hazardous wastes that were generated at U.S. DOE-FEMP and the method of generation. Provide an overview of waste storage operations, to include locations, approximate quantities, and a general description of the character of the waste in regard to potential hazards associated with a specific storage unit.

19. G-2 Emergency Coordinators:

OAC 3745-50-44(A)(7); 3745-54-52(D); 3745-54-55;

- a. Table G-1 includes a list of the primary and alternate emergency coordinators, however it does not indicate the order in which the alternates would assume responsibility if the primary emergency coordinator were not available. Please list the alternates in the order in which they will assume responsibility.
- b. Section G-2 of the contingency plan lists duties and responsibilities of members of the emergency staff. These descriptions do not describe the qualifications for all individuals who will act in these positions. The qualifications presented must demonstrate that all individuals who assume the role of Emergency Coordinator (AEDO), Emergency Duty Officer or Emergency Chief, have the knowledge and experience to respond to all emergencies which may occur at the facility.

20. G-3 Implementation:

OAC 3745-54-52(A); 3745-54-56(D); 3745-50-44(A)(7);

- a. Figure G-4 summarizes the contingency plan implementation and notification action. Please provide further clarification of this flow diagram in the text. The flow chart states that the Emergency Coordinator categorizes the event as Alert, Site Area Emergency or, General Emergency associated with hazardous waste; however, Figure G-5 (Event Categorization/Notification Guide) lists these other event categories; Loggable, Off-Normal and, Unusual Occurrence.
- b. Figure G-5 is labeled Event Categorization/Notification Guide. The Section G Table of Contents and the text refer to Figure G-5 as the Emergency Action Level Guide. Please make the appropriate change to remain consistent.

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- c. Figure G-5 summarizes the implementation requirements and response action required for varying levels of site emergencies. Within the narrative, provide an explanation of how event boundaries or parameters are established. For example;
- i) "Chemical/Radiological releases with significant onsite impact." What criteria will be used to determine significant impact?
 - ii) "Spill/release of hazardous waste that threatens human health or the environment." What criteria will be used to determine that a threat exists?
- d. The contingency plan does not clearly state how and when the plan will be implemented. As an example, the first paragraph on page 4 of Attachment G-1 states, "Even events that involve response by the Emergency Response Team may, if the Emergency Coordinator (AEDO) so determines, not require implementation of this Contingency Plan." Please provide the specific criteria that will be used to determine whether or not the Contingency Plan will be implemented in response to an explosion, fire, or hazardous waste spill.
21. G-4a Notification:
OAC 3745-54-56(A); 3745-50-44(A)(7);
- Page G-14 provides a list of agencies/individuals that would be notified in the event of an emergency, but fails to specify what the appropriate local organizations are, or which Federal and State regulatory agencies will be notified. Please include in the contingency plan a list of the appropriate local organizations, and the Federal and State regulatory agencies who would be notified.
22. G-4d Control Procedures:
OAC 3745-54-52(A); 3745-50-44-(A)(7);
- The plan does not specify the type of Emergency Equipment that will be used in response to an explosion, fire, or spills/material release. Include in this section, a list of emergency equipment that will be used, including personal protective equipment.
23. G-4e Prevention of Recurrence or Spread of Fires, Explosions, or Releases: OAC 3745-50-44(A)(7); 3745-54-56(E);
- The plan does not state that processes and operations will be stopped, where applicable, to prevent the

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recurrence or spread of fires, explosions, or releases. Include in the contingency plan provision for ceasing processes and operations, where applicable.

24. G-4g Incompatible Waste:

OAC 3745-50-44-(A)(7); 3745-54-56(H)(1);

- a. The plan does not specify how the AEDO will ensure that material that is incompatible with the released material will not be introduced into the affected area. Please provide details specifying procedures and/or equipment that will ensure that no mixing of incompatible materials will occur.
- b. The contingency plan refers to Reactivity Group Codes in this section. Expand the narrative briefly to emphasize the significance of the codes, and indicate where additional information on the subject is located within the permit application.

25. G-4h Post-Emergency Equipment Maintenance:

OAC 3745-50-44(A)(7); 3745-54-56(H)(2);

Within the narrative, indicate that decontamination procedures will apply to any contaminated equipment.

26. G-4i Container Spills and Leakage:

OAC 3745-50-44(A)(7); 3745-54-52; 3745-55-71;

The section does not adequately address the subject of container spills and leakage, (See Section G general comments). Expand this section to describe contingent plans to be implemented in the event of a large spill.

G-4j Tank Spills and Leakage

27. G-4j(1) Stopping Waste Addition:

OAC 3745-50-44(A)(7); 3745-54-52; 3745-55-96(A);

The permit does not clearly state that the flow of hazardous waste into the tank system must be stopped immediately. Revise this section to indicate that hazardous waste flow into tanks or secondary containment systems will be stopped once a leak or spill is detected in a tank system.

28. G-4j(2) Removing Waste:

OAC 3745-50-44(A)(7); 3745-54-52; 3745-55-96(B);

The contingency plan does not explain what "tank area"

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refers to. Please specify in this section that wastes will be removed from the tank or secondary containment system, as necessary.

29. G-4j(4) Notifications, Reports:

OAC 3745-50-44(A)(7); 3745-54-52; 3745-55-96(D);

Revise the language to specify that any release to the environment (except a leak or spill that is less than or equal to one pound and immediately contained and cleaned up) will be reported to the Director within 24 hours of its detection.

30. G-4j(5) Provision of Secondary Containment, Repair or Closure:
OAC 3745-50-44(A)(7); 3745-54-52; 3745-55-96(E);

- a. The fourth paragraph of this section (p. G-27) is confusing. Please reword to indicate that if the source of the release is a leak from a tank without secondary containment, secondary containment will be provided, unless the component from which the leak occurred is on an aboveground portion of the tank that can be visually inspected.
- b. The last paragraph of this section refers to 40 CFR 264.192 and 264.196. Please add the Ohio Administrative Codes that correspond (OAC 3745-55-92 and OAC 3745-55-93) with the Federal Regulations.

G-4k Surface Impoundment Spills and Leakage:

G-4k(1) Emergency Repairs:

OAC 3745-50-44(A)(7); 3745-54-52; 3745-56-27

31. This section (and its sub-sections) does not address the contingent procedures for removing a surface impoundment from service in the event of an apparent emergency affecting the integrity of the impoundment. Revise as appropriate. Describe the procedures used for removing a surface impoundment from service to address G-4k(1)(a) through G4k(1)(e).

32. G-4k(1)(a) Stopping Waste Addition:

OAC 3745-50-44(A)(7); 3745-54-52; 3745-56-27(B)(1);

The meaning of the sentence in this section is not completely clear. Revise to describe procedures to stop waste addition in the event of an emergency repair.

33. G-4k(1)(b) Containing Leaks:

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OAC 3745-50-44(A)(7); 3745-54-52; 3745-56-27(B)(2);

The meaning of the sentence in this section is not completely clear, and does not adequately describe the procedures to contain leakage. Revise and expand in order to describe procedures to contain leaks as the result of an emergency repair.

34. G-4k(1)(c) Stopping Leaks:

OAC 3745-50-44(A)(7); 3745-54-52; 3745-56-27(B)(3);

The sentence in this section is not sufficient to adequately describe contingent procedures for stopping leaks in the event of emergency repairs. Revise as appropriate.

35. G-4k(1)(d) Preventing Catastrophic Failure:

OAC 3745-50-44(A)(7); 3745-54-52; 3745-56-27(B)(4);

The sentence in this section is not sufficient to adequately describe contingent procedures for preventing catastrophic failure of an impoundment as a result of an emergency. Revise as appropriate.

36. G-4k(1)(e) Emptying the Impoundment:

OAC 3745-50-44(A)(7); 3745-54-52; 3745-56-27(B)(5);

This section of the contingency plan should discuss the procedures for emptying the surface impoundment during an emergency when a leak cannot be stopped. The permit application addresses CERCLA closure activities for surface impoundments. This information is not relevant to the contingency plan. Revise as appropriate.

37. G-4k(3) Repairs as a Result of Sudden Drop:

OAC 3745-50-44(A)(7); 3745-54-52; 3745-56-27(D)(2);

This section (and its sub-sections) would benefit by a revision to describe contingent repair procedures when the impoundment has been removed from service. These procedures should be viewed as follow-on to those described within Section G-4k(1). Revise the language of the first sentence of this section to indicate that the impoundment is out-of-service, (ie., empty). The section should then contain a discussion of appropriate procedures necessary to repair the unit and return it to service.

38. G-4k(3)(a) Existing Portions of the Surface Impoundment:

OAC 3745-50-44(A)(7); 3745-54-52;

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OAC 3745-56-27(D)(2)(a);

Delete the first sentence of this section. U.S. DOE-FEMP may wish to indicate that a liner would be installed in compliance with OAC 3745-56-27(D)(2), as an alternative to the response actions mentioned.

39. G-4k(3)(b) Other Portions of the Surface Impoundment:
OAC 3745-50-44(A)(7); 3745-54-52;
OAC 3745-56-27(D)(2)(6);

Delete the sentence in this section and indicate that for other portions of the surface impoundment, a repaired liner must be certified by a qualified engineer as meeting the design specifications approved in the permit.

40. G-5 Emergency Equipment:
OAC 3745-50-44(A)(7); 3745-54-52(E);

- a. The contingency plan states under Facility Alarm System (p. G-34) that each alarm system is tested periodically. Specify the testing frequency of the alarm systems.
- b. The last paragraph on p. G-37 incorrectly references Attachment G-1. The reference should be Attachment G-2.

41. G-6 Coordination Agreements:
OAC 3745-50-44(A)(7); 3745-54-52(C); 3745-54-37;

- a. This section states that "Off-site emergency organizations have signed mutual aid agreements and/or have agreed to provide needed assistance to the FEMP at local, county, state and federal levels...A list of participants in mutual aid agreements and updated communication links is provided in Table G-1." This table contains several lists of personnel and organizations. Revise Table G-1 to clarify which organizations are participants in mutual aid agreements.
- b. Other than those items indicated in the third paragraph, Expand this section to describe any agreements or efforts to familiarize local emergency responders with both the facility and actions needed in case of an emergency.

42. G-7 Evacuation Plan:
OAC 3745-50-44(A)(7); 3745-54-52(F);

Figures G-7 and G-8 apparently refer to components of the Evacuation Plan, however, they are neither referenced nor explained in the text.

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43. G-8 Reports:
OAC 3745-50-44(A)(7); 3745-54-56(J);

a. In Section G-8a, please indicate that Form B is shown on Figure G-10, and that Form C is shown on Figure G-11.

H. PERSONNEL TRAINING CHECKLIST

44. H-1 Outline of Training Program:
OAC 3745-50-44(A)(12); 3745-54-16(A)(1);

Attachment H-1 supplies the Training Outline for the various categories of workers on-site. For several of the training programs the frequency in years column states "only if required". Please specify who will determine whether or not this training is applicable for the employee.

45. H-1c Training Director:
OAC 3745-50-44(A)(12); 3745-54-16(A)(2);

This section fails to demonstrate that the Training Director is a person trained in hazardous waste management. Please supply supplemental information that will indicate the Training Director's level of expertise in hazardous waste management.

I. CLOSURE PLANS, POST-CLOSURE PLANS, AND FINANCIAL REQUIREMENTS:

46. I-1e(2) Disposal or Decontamination of Equipment, Structures, and Soils:
OAC 3745-50-44(A)(12); 3745-55-12(B)(4); 3745-55-14;
OAC 3745-55-11;

- a) Within Section I-1e(2)(c) of the permit application, describe or list the types of equipment used for closure activities which may undergo decontamination procedures.
- b) Within Section I-1e(2)(c) of the permit application, describe the material and construction of temporary dikes used to contain runoff during decontamination procedures.

47. I-1e(4) Closure of Containers:
OAC 3745-55-78; 3745-55-12(B)(3); 3745-50-44(A)(13);
OAC 3745-55-11;

Within Section I-1e(4)(g) of the permit application, (subheading Hazardous Waste Management Description, fourth paragraph, fourth bullet), clarify whether the

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storm sewer inlets/catch basins are in active operation
on the Plant 1 Pad (after the up-grade).

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TECHNICAL ADEQUACY COMMENTS

48. B-2 Topographic Map:
OAC 3745-50-44(A)(19);

In order to improve the readability of the topographic map of the facility and surrounding area, it is requested that this map be replaced by a topographic map with either a 2 or 5 foot contour interval. The numerical elevations should be clearly legible.

49. B-4 Traffic Information:
OAC 3745-50-44(10);

The last paragraph of this section describes off-site shipments transported by tractor trailer trucks. Elaborate on the types and quantities of hazardous waste shipments. Estimate the volume (number of trucks per unit time) of transport traffic. Identify transporters routinely utilized by the facility, and indicate the type of containers loaded onto such transport vehicles.

C. WASTE CHARACTERISTICS CHECKLIST

50. C-1 Chemical and physical analyses:
OAC 3745-50-44(A)(2); 3745-54-13(A);

- a. Expand this section to provide a more detailed description of the various waste streams from the three administrative categories indicated (Backlog waste, Newly Generated Waste, Newly Identified Backlog Waste).
- b. Revise the Land Ban Status Column of Table C-1 to reflect the expiration of the National Capacity Variance for third-third wastes.

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C-2 Waste analysis plan:

51. C-2a Parameters and rationale:
OAC 3745-54-13(B)(1);

- a. Although DOE-FEMP has provided a list of parameters and rationale for waste analysis, (Table C-3) it is not clear that those parameters listed correspond to all applicable waste codes listed in the Part A Application.
- b. In Table C-3, rather than simply describe the parameter, the information presented as rationale should specify how these parameters will provide sufficient information on waste properties in order to properly store the waste.

52. C-2c Sampling methods:
OAC 3745-54-13(B)(3);

Information in this section (under subheading "Number of Samples", page C-13 and C-14) needs to be clarified with respect to the issue of representative sampling. Reword the last sentence of the second paragraph under "Number of Samples", to indicate that the guideline shows the number of containers to be sampled for the purpose of collecting a representative sample of that particular (homogenous) waste. Are these discrete samples that are then composited for analysis? The second sentence of the sixth paragraph under the same subheading states that "Composite samples are also used for large populations of containers with capacities of 55 gallons or less. Indicate what constitutes a "large population" in this context. Within this section U.S. DOE-FEMP should distinguish between collecting composites for the purposes of representative sampling, as opposed to compositing for analytical cost considerations.

53. C-2d Frequency of Analyses:
OAC 3745-54-13(B)(4); 3745-50-44(A)(3);

In the second paragraph of this section, delete the word "usually" and commit to a specific frequency for re-analysis of wastes generated by continuous processes.

54. C-2e Additional Requirements for Wastes Generated Off-Site:
OAC 3745-54-13(C); 3745-50-44(A)(3);

- a. This section states "No hazardous waste from off-site facilities is accepted and/or stored at the FEMP unless the conditions of the Consent Decree and its proposed amendments are met." Include this information as part of

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the permit application (Reference Completeness Comment #2. a.).

- b. Within this section, specify the types of hazardous wastes to be accepted from off-site.
- c. The first sentence of the second paragraph of this section reads "Generators may provide...waste characterization data for each waste stream shipped to the FEMP from an off-site facility..." Later in the same paragraph the application reads "This data usually precedes actual shipment of the waste so that FEMP personnel can review the data and confirm that the waste can be stored at the FEMP." The generator is requested to furnish information for each waste stream..." Delete the words "may", "usually", and "requested" from the text and revise this language to reflect established consistent criteria for the preacceptance of off-site waste.
- d. The third paragraph in this section states "In some cases, the FEMP may request a sample for preacceptance analysis prior to shipment." Elaborate on this information to describe the criteria for requesting, or not requesting a sample.
- e. Paragraph eight of this section indicates that U.S. DOE-FEMP would complete a new uniform hazardous waste manifest for return shipment in the event a shipment is rejected by the facility. This is inconsistent with the hazardous waste manifest system. The original manifest should be used to indicate the reasons for rejecting the shipment, and would accompany the returned shipment to the generator. Revise the text as appropriate.

55. C-3b Notification and Certification Requirements:
 OAC 3745-50-44(A)(3); 3745-54-13(A)(1);

Revise the language within this section, (under the subheading of "Treatment of Characteristically Hazardous Waste", page C-30) which refers to the FEMP treatment of a characteristic hazardous waste. The wording is inappropriate since U.S. DOE-FEMP is not applying for a permit to treat hazardous waste.

56. C-3c Additional Requirements Pertaining to Storage of Restricted Wastes:
 OAC 3745-50-44(A)(3); 3745-54-13(A)(1); 3745-59-50;

The National Capacity Variance for mixed waste LDR effective dates expired May 8, 1992. Reword information

Need
 C-3 heading
 →

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in this section to reflect the current LDR status for storage of restricted waste at U.S. DOE-FEMP.

57. C-3f Exemptions From and Extensions To Land Disposal Restrictions:
OAC 3745-54-13(A)(1); 3745-50-44(A)(3);
3745-50-44-(A)(21); 3745-59-05;

Update information in this section (and subsections to C-3f) to account for U.S. DOE applications for case-by-case extensions/exemptions from LDR restrictions.

PART B PERMIT REVIEW

SIGN-OFF SHEET

Facility: U.S. DOE - FEMPReviewers: PHIL HARRIS / ROBIN FISHER

Ohio I.D. # _____

U.S. ID# OH 6890008976Date: JULY 27, 1992

Section	Date	Complete	Technically Adequate	Primary Reviewer
A. Part A Application	7-27-92	N	N	Phillip C. Harris Robin X. Fisher
B. Facility Description	7-27-92	N	N	Phillip C. Harris Robin X. Fisher
C. Waste Description	7-27-92	N	N	Phillip C. Harris Robin X. Fisher
D. Process Information	7-27-92	N	N	Phillip C. Harris Robin X. Fisher
E. Ground Water	7-27-92	N	N	Phillip C. Harris Robin X. Fisher
F. Procedures to Prevent Hazards	7-27-92	N	N	Phillip C. Harris Robin X. Fisher
G. Contingency Plan	7-27-92	N	N	Phillip C. Harris Robin X. Fisher
H. Personnel Training	7-27-92	N	N	Phillip C. Harris Robin X. Fisher
I. Closure Plan (Excluding Financial Assurance)	7-27-92	N	N	Phillip C. Harris Robin X. Fisher
J. Corrective Action		N/A	N/A	
K. Other Federal Laws	7-27-92	Y	Y	Phillip C. Harris Robin X. Fisher
L. Part B Certification	7-27-92	Y	Y	Phillip C. Harris Robin X. Fisher
Financial Assurance		N/A	N/A	

District Office to determine adequacy on Sections A through L. Enforcement Group, CO to determine adequacy on Financial Assurance. Engineering Section, CO to make a determination if application is ready for transmittal to HWFB or the Director.

Application approved for transmittal: _____

C.O. Reviewer _____

7/27/92
DateD.O. Supervisor: Shane N. O'Connell

C.O. Supervisor: _____

RCRA PART B PERMIT APPLICATION COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

REVISION 7, 8/89

DISCLAIMER: This checklist has been reproduced as received from the contractor; it has not been thoroughly reviewed by EPA, and therefore is not an official EPA policy document. Rather, it is a tool used by the contractor and EPA permit writers to evaluate RCRA Part B permit applications. These checklists are periodically revised as the contractor or Regional permit writers use them.

Revision 7, 8/89

Facility Name U.S. DOE-FEMP
 ID No. OH 6890008976
 Date Part B Received NOV 7, 1991
 Date Review Due _____

COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

	Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
A. PART A APPLICATION.	<u>N</u>	<u>N</u>	<u>#1</u>		<u>VOL 1</u>
B. FACILITY DESCRIPTION					
B-1 General description	<u>N</u>	<u>N</u>	<u>#2</u>		<u>Sec B-1 p. B-2 + B-3</u>
B-2 Topographic map	<u>Y</u>	<u>N</u>	<u>#48</u>		<u>Sec B-2 p. B-4 → B-7</u>
B-2a General requirements	<u>Y</u>	<u>Y</u>			<u>" p. B-4 → B-7</u>
B-2b Additional requirements for land disposal facilities	<u>NA</u>	<u>NA</u>			
B-3 Location information					
B-3a Seismic standard	<u>NA</u>	<u>NA</u>			
B-3b Floodplain standard	<u>Y</u>	<u>Y</u>			<u>Sec B-3 p. B-8 + B-9</u>
B-3b(1) Demonstration of compliance	<u>NA</u>	<u>NA</u>			
B-3b(1)(a) Flood proofing and flood protection measures; or	<u>NA</u>	<u>NA</u>			
B-3b(1)(b) Flood plan	<u>NA</u>	<u>NA</u>			
B-3b(2) Plan for future compliance with floodplain standard	<u>NA</u>	<u>NA</u>			
B-3b(3) Waiver for Land Storage and Disposal Facilities	<u>NA</u>	<u>NA</u>			
B-4 Traffic information	<u>N</u>	<u>N</u>	<u>#3 #49</u>		<u>Sec B-4 p. B-10 + B-11</u>

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

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C. WASTE CHARACTERISTICS

		Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
C-1	Chemical and physical analyses	<u>N</u>	<u>N</u>	<u>#4 + #50</u>		<u>Sec C-1 p. C-3 → C-8</u>
C-1a	Containerized wastes	<u>Y</u>	<u>Y</u>			<u>" p. C-4 + C-5</u>
C-1b	Waste in tank systems	<u>NA</u>	<u>NA</u>			
C-1c	Waste in piles	<u>NA</u>	<u>NA</u>			
C-1d	Landfilled wastes	<u>NA</u>	<u>NA</u>			
C-1e	Wastes incinerated and wastes used in performance tests	<u>NA</u>	<u>NA</u>			
C-1f	Wastes to be land treated	<u>NA</u>	<u>NA</u>			
C-1g	Wastes in miscellaneous treatment units	<u>NA</u>	<u>NA</u>			
C-2	Waste analysis plan	<u>N</u>	<u>N</u>	<u>H</u>		<u>Sec C-2 p. C-9 → C-21</u>
C-2a	Parameters and rationale	<u>Y</u>	<u>N</u>	<u>#51</u>		<u>" p. C-11</u>
C-2b	Test methods	<u>N</u>	<u>N</u>	<u>#5</u>		<u>" p. C-11 + C-12</u>
C-2c	Sampling methods	<u>N</u>	<u>N</u>	<u>#6 + #52</u>		<u>" p. C-12 → C-17</u>
C-2d	Frequency of analyses	<u>Y</u>	<u>N</u>	<u>#53</u>		<u>" p. C-17 + C-18</u>
C-2e	Additional requirements for wastes generated off-site	<u>Y</u>	<u>N</u>	<u>#54</u>		<u>" p. C-18 → C-21</u>
C-2f	Additional requirements for ignitable, reactive or incompatible wastes	<u>Y</u>	<u>Y</u>			<u>" p. C-21</u>

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

		Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
C-3	Waste analysis requirements pertaining to land disposal restrictions	<u>Y</u>	<u>N</u>	<u>H</u>		<u>Sec C-3 p. C-22 → C-35</u>
C-3a	Waste characterization	<u>Y</u>	<u>Y</u>			<u>p. C-22 → C-28</u>
C-3a(1)	Waste characteristics: solvent wastes and dioxin containing wastes	<u>Y</u>	<u>Y</u>			<u>" p. C-23 + C-24</u>
C-3a(2)	Waste characteristics: California list wastes	<u>Y</u>	<u>Y</u>			<u>" p. C-24 → C-26</u>
C-3a(3)	Waste characteristics: First third wastes with treatment standards	<u>Y</u>	<u>Y</u>			<u>" p. C-27</u>
C-3a(4)	Waste characteristics: second third wastes with treatment standards	<u>Y</u>	<u>Y</u>			<u>" p. C-27</u>
C-3a(5)	Waste characteristics: Soft hammer wastes	<u>Y</u>	<u>Y</u>			<u>" p. C-28</u>
C-3a(5)(a)	Soft hammer wastes: California list wastes with treatment standards	<u>NA</u>	<u>NA</u>			
C-3a(5)(b)	Soft hammer wastes: California list wastes without treatment standards	<u>NA</u>	<u>NA</u>			
C-3b	Notification and certifica- tion requirements	<u>Y</u>	<u>N</u>	<u>#55</u>		<u>" p. C-28 → C-31</u>
C-3b(1)	Retention of generator notices and certifications	<u>Y</u>	<u>Y</u>			<u>" p. C-31</u>

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

		Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
C-3b(2)	Notification and certification for wastes to be further managed	<u>Y</u>	<u>Y</u>	—	—	" p. C-31
C-3b(3)	Notification and certification for soft hammer wastes not subject to California list prohibitions	<u>NA</u>	<u>NA</u>	—	—	
C-3b(4)	Additional notification and certification requirements for treatment facilities	<u>NA</u>	<u>NA</u>	—	—	
C-3b(4)(a)	Wastes with treatment standards expressed as concentrations	<u>NA</u>	<u>NA</u>	—	—	
C-3b(4)(b)	Wastes with treatment standards expressed as technologies	<u>NA</u>	<u>NA</u>	—	—	
C-3b(4)(c)	California list wastes not subject to treatment standards	<u>NA</u>	<u>NA</u>	—	—	
C-3b(4)(d)	Recyclable materials used in a manner constituting disposal	<u>NA</u>	<u>NA</u>	—	—	
C-3b(5)	Additional notification and certification requirements for disposal facilities	<u>NA</u>	<u>NA</u>	—	—	
C-3b(6)	Notification and certification requirements pertaining to landfill and surface impoundment disposal restrictions	<u>NA</u>	<u>NA</u>	—	—	

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

	Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
C-3b(6)(a) Requirements for treatment storage, and recovery facilities	<u>NA</u>	<u>NA</u>	_____	_____	_____
C-3b(6)(b) Requirements for treatment and recovery facilities	<u>NA</u>	<u>NA</u>	_____	_____	_____
C-3b(6)(c) Requirements for disposal facilities	<u>NA</u>	<u>NA</u>	_____	_____	_____
C-3c Additional requirements pertaining to storage of restricted wastes	<u>Y</u>	<u>N</u>	<u>#56</u>	_____	" p. C-32 + C-33
C-3c(1) Restricted wastes stored in containers	<u>Y</u>	<u>Y</u>	_____	_____	" p. C-33 + C-34
C-3c(2) Restricted wastes stored in tanks	<u>NA</u>	<u>NA</u>	_____	_____	_____
C-3c(3) Storage of liquid PCB wastes	<u>Y</u>	<u>Y</u>	_____	_____	" p. C-34
C-3d Additional requirements for treatment facilities	<u>NA</u>	<u>NA</u>	_____	_____	_____
C-3d(1) Wastes with treatment standards expressed as concentrations in the waste	<u>NA</u>	<u>NA</u>	_____	_____	_____

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	Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
C-3d(2) Wastes with treatment standards expressed as concentrations in the waste extract	<u>NA</u>	<u>NA</u>	_____	_____	_____
C-3d(3) California list wastes not subject to treatment standards	<u>NA</u>	<u>NA</u>	_____	_____	_____
C-3e Additional requirements for land disposal facilities	<u>NA</u>	<u>NA</u>	_____	_____	_____
C-3f Exemptions from and extensions to land disposal restrictions	<u>Y</u>	<u>N</u>	<u>#57</u>	_____	" p. C-34 + C-35
C-3f(1) Case-by-case extensions to an effective date	<u>Y</u>	<u>N</u>	<u>#57</u>	_____	" p. C-35
C-3f(2) Exemption from a prohibition	<u>NA</u>	<u>NA</u>	_____	_____	_____
C-3f(3) Variance from a treatment standard	<u>NA</u>	<u>NA</u>	_____	_____	_____
C-3f(4) Additional requirements for surface impoundments exempted from land disposal restrictions	<u>NA</u>	<u>NA</u>	_____	_____	_____
C-3f(4)(a) Treatment of wastes	<u>NA</u>	<u>NA</u>	_____	_____	_____
C-3f(4)(b) Sampling and testing	<u>NA</u>	<u>NA</u>	_____	_____	_____
C-3f(4)(c) Annual removal of residues	<u>NA</u>	<u>NA</u>	_____	_____	_____
C-3f(4)(d) Design requirements	<u>NA</u>	<u>NA</u>	_____	_____	_____
C-3g Requirements for land disposal facilities with an approved exemption or extension	<u>Y</u>	<u>Y</u>	_____	_____	* section subject to change " p. C-35

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

		Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information		
D. PROCESS INFORMATION								
D-1	Containers					<u>Sec D p. D-1 → D-49</u>		
D-1a	Containers with free liquids							
D-1a(1)	Description of container	<u>Y</u>	<u>N</u>	<u>#7</u>		<u>"</u>	<u>"</u>	<u>"</u>
D-1a(2)	Container management practices	<u>Y</u>	<u>N</u>	<u>#8</u>		<u>"</u>	<u>"</u>	<u>"</u>
D-1a(3)	Secondary containment system design and operation	<u>N</u>	<u>Y</u>	<u>H</u>		<u>"</u>	<u>"</u>	<u>"</u>
D-1a(3)(a)	Requirement for the base or liner to contain liquids	<u>Y</u>	<u>N</u>	<u>#9</u>		<u>"</u>	<u>"</u>	<u>"</u>
D-1a(3)(b)	Containment system drainage	<u>Y</u>	<u>Y</u>					
D-1a(3)(c)	Containment system capacity	<u>Y</u>	<u>N</u>	<u>#10</u>		<u>"</u>	<u>"</u>	<u>"</u>
D-1a(3)(d)	Control of run-on	<u>Y</u>	<u>Y</u>			<u>"</u>	<u>"</u>	<u>"</u>
D-1a(3)(e)	Removal of liquids from containment systems	<u>Y</u>	<u>Y</u>			<u>"</u>	<u>"</u>	<u>"</u>
D-1b	Containers without free liquid							
D-1b(1)	Test for free liquids	<u>Y</u>	<u>N</u>	<u>#11</u>		<u>"</u>	<u>"</u>	<u>"</u>
D-1b(2)	Description of containers	<u>Y</u>	<u>N</u>	<u>#12</u>		<u>"</u>	<u>"</u>	<u>"</u>
D-1b(3)	Container management practices	<u>Y</u>	<u>N</u>	<u>#13</u>		<u>"</u>	<u>"</u>	<u>"</u>
D-1b(4)	Container storage area drainage	<u>Y</u>	<u>Y</u>			<u>"</u>	<u>"</u>	<u>"</u>
D-2	Tank systems							
D-2a	Tank systems descriptions	<u>NA</u>	<u>NA</u>					
D-2a(1)	Dimensions and capacity	<u>NA</u>	<u>NA</u>					

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

		Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
D-2a(2)	Description of feed systems, safety cutoff, bypass systems, and pressure controls	<u>NA</u>	<u>NA</u>			
D-2a(3)	Diagram of piping, instrumenta- tion and process-flow	<u>NA</u>	<u>NA</u>			
D-2a(4)	Ignitable, reactive and incomptaible wastes	<u>NA</u>	<u>NA</u>			
D-2b	Existing tank system					
D-2b(1)	Assessment of existing tank systems integrity	<u>NA</u>	<u>NA</u>			
D-2c	New tank systems	<u>NA</u>	<u>NA</u>			
D-2c(1)	Assessment of new tank system integrity	<u>NA</u>	<u>NA</u>			
D-2c(2)	Description of tank system installation and testing plans and procedures	<u>NA</u>	<u>NA</u>			
D-2d	Containment and detection of releases	<u>NA</u>	<u>NA</u>			
D-2d(1)	Plans and description of the design, construction, and operation of the secondary containment system	<u>NA</u>	<u>NA</u>			
D-2d(1)(a)	Tank age determination	<u>NA</u>	<u>NA</u>			
D-2d(1)(b)	Requirements for secondary containment and leak detection	<u>NA</u>	<u>NA</u>			
D-2d(1)(c)	Requirements for an external liner, vault, double-walled tank or equivalent device	<u>NA</u>	<u>NA</u>			

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	Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
D-2d(1)(d) Secondary containment and leak detection requirements for ancillary equipment	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-2d(2) Requirements for tank systems until secondary containment is implemented	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-2d(3) Variance from secondary containment requirements	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-2d(3)(a) Variance based on a demonstration of equivalent protection of groundwater and surface water	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-2d(3)(b) Variance based on a demonstration of no substantial present or potential hazard	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-2d(3)(c) Exemption based on no free liquids and location inside a building	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-2e Controls and practices to prevent spills and overflow	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3 Waste piles					_____
D-3a List of wastes	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3b Liner exemption					_____
D-3b(1) Enclosed dry piles	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3b(1)(a) Protection from precipitation	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3b(1)(b) Free liquids	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3b(1)(c) Run-on protection	<u>NA</u>	<u>NA</u>	_____	_____	_____

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

	Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
D-3b(1)(d) Wind dispersal control	<u>NA</u>	<u>NA</u>			
D-3b(1)(e) Leachate generation	<u>NA</u>	<u>NA</u>			
D-3b(2) Alternate design/no migration	<u>NA</u>	<u>NA</u>			
D-3c Liner engineering report	<u>NA</u>	<u>NA</u>			
D-3c(1) Liner description	<u>NA</u>	<u>NA</u>			
D-3c(2) Liner location relative to high water table	<u>NA</u>	<u>NA</u>			
D-3c(3) Calculation of required soil liner thickness	<u>NA</u>	<u>NA</u>			
D-3c(4) Liner strength requirements	<u>NA</u>	<u>NA</u>			
D-3c(5) Liner strength demonstration	<u>NA</u>	<u>NA</u>			
D-3c(6) Liner/waste compatibility testing results	<u>NA</u>	<u>NA</u>			
D-3c(7) Liner installation	<u>NA</u>	<u>NA</u>			
D-3c(7)(a) Synthetic liner seaming	<u>NA</u>	<u>NA</u>			
D-3c(7)(b) Soil liner compaction	<u>NA</u>	<u>NA</u>			
D-3c(7)(c) Installation inspection/testing programs	<u>NA</u>	<u>NA</u>			
D-3c(8) Liner coverage	<u>NA</u>	<u>NA</u>			
D-3c(9) Liner exposure prevention	<u>NA</u>	<u>NA</u>			
D-3c(10) Synthetic-liner bedding	<u>NA</u>	<u>NA</u>			
D-3 Liner foundation report					
D-3 Liner foundation design description	<u>NA</u>	<u>NA</u>			

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

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		Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
D-3d(2)	Subsurface exploration data	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3d(3)	Laboratory testing data	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3d(4)	Engineering analyses					_____
D-3d(4)(a)	Settlement potential	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3d(4)(b)	Bearing capacity and stability	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3d(4)(c)	Potential for bottom heave or blow-out	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3d(4)(d)	Construction and operational loadings	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3d(5)	Foundation installation pro- cedures	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3d(6)	Foundation installation in- spection program	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3e	Leachate collection and removal system	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3e(1)	System design and operation	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3e(2)	Chemical resistance	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3e(3)	Strength of materials	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3e(4)	Prevention of clogging	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3e(5)	Installation	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3e(6)	Maintenance	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3f	Run-on control system					_____
D-3f(1)	Calculation of peak flow	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3f(2)	Design and performance	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3f(3)	Construction	<u>NA</u>	<u>NA</u>	_____	_____	_____

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		Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
D-3f(4)	Maintenance	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3g	Run-off control system					_____
D-3g(1)	Calculation of peak flow	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3g(2)	Design and performance	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3g(3)	Construction	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3g(4)	Maintenance	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3h	Management of collection and holding units	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3i	Control of wind dispersal	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3j	Groundwater monitoring exemption					_____
D-3j(1)	Engineered structure	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3j(2)	No liquid waste	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3j(3)	Exclusion of liquids	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3j(4)	Containment system	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3j(5)	Leak detection system	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3j(6)	Operation of leak detection system	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3j(7)	No migration	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3k	Treatment within the pile					_____
D-3k(1)	Treatment process description	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3k(2)	Equipment used	<u>NA</u>	<u>NA</u>	_____	_____	_____
D-3k(3)	Residuals description	<u>NA</u>	<u>NA</u>	_____	_____	_____

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

	Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
D-4d(2) Subsurface exploration data	NA	NA			
D-4d(3) Laboratory testing data					
D-4d(4) Engineering analyses					
D-4d(4)(a) Settlement potential					
D-4d(4)(b) Bearing capacity					
D-4d(4)(c) Potential for excess hydro- static or gas pressure					
D-4e Liner systems, liners					
D-4e(1) Synthetic liners					
D-4e(1)(a) Synthetic liner compatibility data					
D-4e(1)(b) Synthetic liner strength					
D-4e(1)(c) Synthetic liner bedding					
D-4e(2) Soil liners					
D-4e(2)(a) Material testing data					
D-4e(2)(b) Soil liner compatibility data					
D-4e(2)(c) Soil liner thickness					
D-4e(2)(d) Soil liner strength					
D-4f Liner system, leachate detection system					
D-4f(1) System operation and design					
D-4f(2) Equivalent capacity					
D-4f(3) Grading and drainage	✓	✓			

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

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		Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
D-31	Special management plan for piles containing wastes F020, F021, F022, F023, F026, and F027	NA	NA			
D-31(1)	Waste description	NA	NA			
D-31(2)	Soil description					
D-31(3)	Mobilizing properties					
D-31(4)	Additional management techniques					
D-4	Surface impoundments					
D-4a	List of wastes					
D-4b	Liner system exemption requests					
D-4b(1)	Exemption based on existing portion					
D-4b(2)	Exemption based on alternative design and location					
D-4c	Liner system, general items					
D-4c(1)	Liner system description					
D-4c(2)	Liner system location relative to high water table					
D-4c(3)	Loads on liner system					
D-4c(4)	Liner system coverage					
D-4c(5)	Liner system exposure prevention					
D-4d	Liner system foundation					
D-4d(1)	Foundation description	✓	✓			

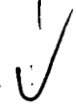
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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

		Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
D-4f(4)	System compatibility	NA	NA			
D-4f(5)	System strength					
D-4f(5)(a)	Stability of drainage layers					
D-4f(5)(b)	Strength of piping					
D-4f(6)	Prevention of clogging					
D-4g	Liner system, construction and maintenance					
D-4g(1)	Material specifications					
D-4g(1)(a)	Synthetic liners					
D-4g(1)(b)	Soil liners					
D-4g(1)(c)	Leachate detection system					
D-4g(2)	Construction specifications					
D-4g(2)(a)	Liner system foundation					
D-4g(2)(b)	Soil liner					
D-4g(2)(c)	Synthetic liners					
D-4g(2)(d)	Leachate detection system					
D-4g(3)	Construction quality control program					
D-4g(4)	Maintenance procedures for leachate detection system					
D-4g(5)	Liner repairs during operations					
D-4h	Prevention of overtopping					
D-4h(1)	Design features					

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

		Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
D-4h(2)	Operating procedure	NA	NA			
D-4h(3)	Overtopping prevention					
D-4h(4)	Freeboard requirements					
D-4h(5)	Outflow destination					
D-4i	Dike stability					
D-4i(1)	Engineer's certification					
D-4i(2)	Dike design description					
D-4i(3)	Erosion and piping protection					
D-4i(4)	Subsurface soil conditions					
D-4i(5)	Stability analysis					
D-4i(6)	Strength and compressibility test results					
D-4i(7)	Dike construction procedures					
D-4i(8)	Dike construction inspection program					
D-4j	Special waste management plan for surface impoundments con- taining wastes F020, F021, F022, F023, F026, and F027					
D-4j(1)	Waste description					
D-4j(2)	Soil description					
D-4j(3)	Mobilizing properties					
D-4j(4)	Additional management techniques					

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

		Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
D-5	Incinerators	NA	NA			
D-5a	Justification for exemption					
D-5b	Trial burn					
D-5b(1)	New incinerator start-up/ shakedown conditions (reserved)					
D-5b(2)	Trial burn plan					
D-5b(2)(a)	Engineering description of incinerator					
D-5b(2)(b)	Sampling, analysis and moni- toring procedures including QA/QC plan					
D-5b(2)(c)	Trial burn schedule					
D-5b(2)(d)	Test protocols					
D-5b(2)(e)	Pollution control equipment operation					
D-5b(2)(f)	Shutdown procedures					
D-5b(2)(g)	New incinerator post-trial burn operation (reserved)					
D-5c	Data in lieu of trial burn					
D-5c(1)	Engineering description of incinerator					
D-5c(2)	Expected incinerator operation					
D-5c(3)	Design and operating condition comparisons					
D-5c(4)	Results of previous trial burns	✓	✓			

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

	Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
D-5c(4)(a) Sampling and analysis techniques	NA	NA			
D-5c(4)(b) Methods and results					
D-5d Determinations					
D-6 Landfills					
D-6a List of wastes					
D-6b Liner system exemption requests					
D-6b(1) Exemption based on existing portion					
D-6b(2) Exemption based on alternative design and location					
D-6b(3) Exemption for monofills					
D-6b(4) Groundwater monitoring exemption					
D-6b(4)(a) Engineered structure					
D-6b(4)(b) No liquid waste					
D-6b(4)(c) Exclusion of liquids					
D-6b(4)(d) Containment system					
D-6b(4)(e) Leak detection system					
D-6b(4)(f) Operation of leak detection system					
D-6b(4)(g) No migration					
D-6c Liner system, general items					
D-6c(1) Liner system description	✓	✓			

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

		Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
D-6c(2)	Liner system location relative to high water table	NA	NA			
D-6c(3)	Loads on liner system					
D-6c(4)	Liner system coverage					
D-6c(5)	Liner system exposure prevention					
D-6d	Liner system, foundation					
D-6d(1)	Foundation description					
D-6d(2)	Subsurface exploration data					
D-6d(3)	Laboratory testing data					
D-6d(4)	Engineering analysis					
D-6d(4)(a)	Settlement potential					
D-6d(4)(b)	Bearing capacity					
D-6d(4)(c)	Stability of landfill slopes					
D-6d(4)(d)	Potential for excess hydrostatic or gas pressure					
D-6e	Liner system, liners					
D-6e(1)	Synthetic liners					
D-6e(1)(a)	Synthetic liner compatibility data					
D-6e(1)(b)	Synthetic liner strength					
D-6e(1)(c)	Synthetic liner bedding					
D-6e(2)	Soil liners					
D-6e(2)(a)	Material testing data					

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

	Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
D-6e(2)(b) Soil liner compatibility data	NA	NA			
D-6e(2)(c) Soil liner thickness					
D-6e(2)(d) Soil liner strength					
D-6f Liner system, leachate collection/detection systems					
D-6f(1) System operation and design					
D-6f(2) Equivalent capacity					
D-6f(3) Grading and drainage					
D-6f(4) Maximum leachate head					
D-6f(5) System compatibility					
D-6f(6) System strength					
D-6f(6)(a) Stability of drainage layers					
D-6f(6)(b) Strength of piping					
D-6f(7) Prevention of clogging					
D-6g Liner system, construction and maintenance					
D-6g(1) Material specifications					
D-6g(1)(a) Synthetic liners					
D-6g(1)(b) Soil liners					
D-6g(1)(c) Leachate collection/detection systems					
D-6g(2) Construction specifications					
D-6g(2)(a) Liner system foundation					

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

	Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
D-6g(2)(b) Soil liner	NA	NA			
D-6g(2)(c) Synthetic liners					
D-6g(2)(d) Leachate collection/detection systems					
D-6g(3) Construction quality control program					
D-6g(4) Maintenance procedures for leachate collection/detection system					
D-6g(5) Liner repairs during operations					
D-6h Run-on and run-off control systems					
D-6h(1) Run-on control system					
D-6h(1)(a) Design and performance					
D-6h(1)(b) Calculation of peak flow					
D-6h(2) Runoff control system					
D-6h(2)(a) Design and performance					
D-6h(2)(b) Calculation of peak flow					
D-6h(3) Management of collection and holding units					
D-6h(4) Construction					
D-6h(5) Maintenance					
D-6i Control of wind dispersal					
D-6j Liquids in landfills					
D-6j(1) Bulk or noncontainerized free liquids					

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

		Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
D-6j(2)	Containers holding free liquids	NA	NA			
D-6j(3)	Restriction to small containers					
D-6j(4)	Nonstorage containers					
D-6j(5)	Labpacks					
D-6j(5)(a)	Inside containers					
D-6j(5)(b)	Overpack					
D-6j(5)(c)	Absorbent material					
D-6j(5)(d)	Incompatible wastes					
D-6j(5)(e)	Reactive wastes					
D-6k	Containerized wastes					
D-6l	Special waste management plan for landfills containing wastes F020, F021, F022, F023, F026, and F027					
D-6l(1)	Waste description					
D-6l(2)	Soil description					
D-6l(3)	Mobilizing properties					
D-6l(4)	Additional management techniques					
D-7	Land treatment					
D-7a	Treatment demonstration					
D-7a(1)	Demonstration wastes	✓	✓			

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

	Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
D-7a(2) Demonstration data sources	NA	NA			
D-7a(2)(a) Existing literature					
D-7a(2)(b) Operating data					
D-7a(3) Laboratory/field testing programs					
D-7a(3)(a) Toxicity testing					
D-7a(3)(b) Field plot testing					
D-7a(3)(c) Laboratory testing					
D-7b Land treatment program					
D-7b(1) List of wastes					
D-7b(2) Operating procedures					
D-7b(2)(a) Waste application rates					
D-7b(2)(b) Waste application methods					
D-7b(2)(c) Control of soil pH					
D-7b(2)(d) Enhancement of microbial or chemical reactions					
D-7b(2)(e) Control of soil moisture					
D-7c Unsaturated zone monitoring plan					
D-7c(1) Soil-pore liquid monitoring					
D-7c(1)(a) Sampling location					
D-7c(1)(b) Sampling frequency					
D-7c(1)(c) Sampling equipment	✓	✓			

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

	Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
D-7c(1)(d) Sampling equipment installation	NA	NA			
D-7c(1)(e) Sampling procedures					
D-7c(1)(f) Analytical procedures					
D-7c(1)(g) Chain of custody					
D-7c(1)(h) Background values					
D-7c(1)(i) Statistical methods					
D-7c(1)(j) Justification of Principle Hazardous Constituents					
D-7c(2) Soil core monitoring					
D-7c(2)(a) Sampling location					
D-7c(2)(b) Sampling frequency					
D-7c(2)(c) Sampling equipment					
D-7c(2)(d) Sampling procedures					
D-7c(2)(e) Analytical procedures					
D-7c(2)(f) Chain-of-custody					
D-7c(2)(g) Background values					
D-7c(2)(h) Statistical methods					
D-7c(2)(i) Justification of Principle Hazardous Constituents					
D-7d Treatment zone description					
D-7d(1) Horizontal and vertical dimensions	✓	✓			

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

		Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
D-7g(2)	Soil description	NA	NA			
D-7g(3)	Mobilizing properties					
D-7g(4)	Additional management techniques					
D-7h	Incompatible wastes					
D-8	Miscellaneous units					
D-8a	Description of miscellaneous units					
D-8b	Waste characterization					
D-8c	Treatment effectiveness					
D-8d	Environmental performance standards for miscellaneous units					
D-8d(1)	Protection of groundwater and subsurface environment					
D-8d(1)(a)	Environmental assessment					
D-8d(1)(b)	Performance standards					
D-8d(2)	Protection of surface water, wetlands, and soil surface					
D-8d(2)(a)	Environmental assessment					
D-8d(2)(b)	Performance standards					
D-8d(3)	Protection of the atmosphere					
D-8d(3)(a)	Environmental assessment					
D-8d(3)(b)	Performance standards					
D-8e	Monitoring, analysis inspection, response reporting, and corrective action					

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

		Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
D-7d(2)	Soil survey	NA	NA			
D-7d(3)	Soil series descriptions					
D-7d(4)	Soil sampling data					
D-7d(5)	Seasonal high water table					
D-7e	Unit design, construction, operation, and maintenance					
D-7e(1)	Run-on control					
D-7e(2)	Run-off control					
D-7e(3)	Minimizing hazardous consti- tuent run-off					
D-7e(4)	Management of accumulated run- on and run-off					
D-7e(5)	Control of wind dispersal					
D-7f	Food chain crops					
D-7f(1)	Food chain crop demonstration					
D-7f(1)(a)	Demonstration basis					
D-7f(1)(b)	Test procedures					
D-7f(2)	Cadmium-bearing wastes					
D-7f(2)(a)	Crops for human consumption					
D-7f(2)(b)	Animal feed					
D-7g	Waste management plan for land treatment units con- taining wastes F020, F021, F022, F023, F026, and F027					
D-7g(1)	Waste description	✓	✓			

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

		Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
D-8e(1)	Elements of a monitoring program	NA	NA	—	—	—
D-8e(2)	Air monitoring alternatives	— ↓	— ↓	—	—	—

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

		Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
E.	GROUNDWATER MONITORING	<u>N</u>	<u>N</u>	<u>SEE SECTION E GENERAL COMMENT</u>		VOL 5
E-1	Exemption from groundwater protection requirements					
E-1a	Waste piles					
E-1b	Landfill					
E-1c	No migration					
E-2	Interim status groundwater monitoring data					
E-2a	Description of wells					
E-2b	Description of sampling/analysis procedures					
E-2c	Monitoring data					
E-2d	Statistical procedures					
E-2e	Groundwater assessment plan					
E-3	General hydrogeologic information					
E-4	Topographic map requirements					
E-5	Contaminant plume description					
E-6	General monitoring program requirements					
E-6a	Description of wells					
E-6b	Description of sampling analysis procedures					

COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

		Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
E-6c	Procedures for establishing background quality	_____	_____	_____	_____	_____
E-6d	Statistical procedures	_____	_____	_____	_____	_____
E-6d(1)	Parametric analysis of variance (ANOVA)	_____	_____	_____	_____	_____
E-6d(2)	Non-parametric ANOVA (based on ranks)	_____	_____	_____	_____	_____
E-6d(3)	Tolerance or prediction interval procedure	_____	_____	_____	_____	_____
E-6d(4)	Control chart approach	_____	_____	_____	_____	_____
E-6d(5)	Alternative approach	_____	_____	_____	_____	_____
E-7	Detection monitoring program	_____	_____	_____	_____	_____
E-7a	Indicator parameters, waste constituents, reaction products to be monitored	_____	_____	_____	_____	_____
E-7b	Groundwater monitoring system	_____	_____	_____	_____	_____
E-7c	Background groundwater concentration values for proposed parameters	_____	_____	_____	_____	_____
E-7d	Proposed sampling and analysis procedures	_____	_____	_____	_____	_____
E-7e	Statistically significant increase in any constituent or parameter identified at any compliance point monitoring well	_____	_____	_____	_____	_____

COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

		Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
E-8	Compliance monitoring program					
E-8a	Description of the monitoring program					
E-8a(1)	Waste description					
E-8a(2)	Characterization of contaminated groundwater					
E-8a(3)	Hazardous constituents to be monitored in compliance program					
E-8a(4)	Concentration limits					
E-8a(5)	Alternate concentration limits					
E-8a(5)(i)	Adverse effects on groundwater quality					
E-8a(5)(ii)	Potential adverse effects					
E-8a(6)	Engineering report describing groundwater monitoring system					
E-8a(7)	Proposed sampling and statistical analysis procedures for groundwater data					
E-8a(8)	Groundwater protection standard exceeded at compliance point monitoring well					
E-9	Corrective action program					
E-9a	Characterization of contaminated groundwater					

COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

		Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
E-9b	Concentration limits	_____	_____	_____	_____	_____
E-9c	Alternate concentration limits	_____	_____	_____	_____	_____
E-9c(1)	Adverse effects on groundwater quality	_____	_____	_____	_____	_____
E-9c(2)	Potential adverse effects	_____	_____	_____	_____	_____
E-9d	Corrective action plan	_____	_____	_____	_____	_____
E-9d(1)	Location	_____	_____	_____	_____	_____
E-9d(2)	Construction detail	_____	_____	_____	_____	_____
E-9d(3)	Plans for removing wastes	_____	_____	_____	_____	_____
E-9d(4)	Treatment technologies	_____	_____	_____	_____	_____
E-9d(5)	Effectiveness of correction program	_____	_____	_____	_____	_____
E-9d(6)	Reinjection system	_____	_____	_____	_____	_____
E-9d(7)	Additional hydrogeologic data	_____	_____	_____	_____	_____
E-9d(8)	Operation and maintenance	_____	_____	_____	_____	_____
E-9d(9)	Closure and post-closure plans	_____	_____	_____	_____	_____
E-9e	Groundwater monitoring program	_____	_____	_____	_____	_____
E-9e(1)	Description of monitoring system	_____	_____	_____	_____	_____
E-9e(2)	Description of sampling and analysis procedures	_____	_____	_____	_____	_____
E-9e(3)	Monitoring data and statis- tical analysis procedures	_____	_____	_____	_____	_____
E-9e(4)	Reporting requirements	_____	_____	_____	_____	_____

COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

		Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
F. PROCEDURES TO PREVENT HAZARDS						
F-1	Security					Sec. F p. F-1 → F-4
F-1a	Security procedures and equipment					" p. F-1 → F-4
F-1a(1)	24-hour surveillance system	Y	Y			" p. F-2
F-1a(2)	Barrier and means to control entry					
F-1a(2)(a)	Barrier	Y	Y			" p. F-2
F-1a(2)(b)	Means to control entry	Y	Y			" p. F-3
F-1a(3)	Warning signs	Y	Y			" p. F-3
F-1b	Waiver					
F-1b(1)	Injury to intruder	NA	NA			
F-1b(2)	Violation caused by intruder	NA	NA			
F-2	Inspection schedule					" p. F-5 → F-10
F-2a	General inspection requirements	N	N	#4		" p. F-5
F-2a(1)	Types of problems	Y	Y			" p. F-6
F-2a(2)	Frequency of inspections	Y	Y			" p. F-6
F-2b	Specific process inspection requirements					
F-2b(1)	Container inspection	N	N	#15		" p. F-7
F-2b(2)	Tank system inspection					
F-2b(2)(a)	Tank system external corrosion and releases	NA	NA			

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

	Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
F-2b(2)(b) Tank system construction materials and surrounding area	NA	NA			
F-2b(2)(c) Tank system overfilling control equipment					
F-2b(2)(d) Tank system monitoring and leak detection equipment					
F-2b(2)(e) Tank system cathodic protection					
F-2b(3) Waste pile inspection					
F-2b(3)(a) Run-on and run-off control system					
F-2b(3)(b) Wind dispersal system					
F-2b(3)(c) Leachate collection and removal system					
F-2b(4) Surface impoundment inspection					
F-2b(4)(a) Condition assessment					
F-2b(4)(a)(1) Overtopping control system					
F-2b(4)(a)(2) Impoundment contents					
F-2b(4)(b) Structural integrity					
F-2b(5) Incinerator inspection					
F-2b(5)(a) Incinerator and associated equipment					

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

	Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
F-2b(5)(b) Incinerator waste feed cut-off system and associated alarms	NA	NA			
F-2b(6) Landfill inspection					
F-2b(6)(a) Run-on and run-off control system					
F-2b(6)(b) Wind dispersal control system					
F-2b(6)(c) Leachate collection and removal system					
F-2b(7) Land treatment facility inspection					
F-2b(7)(a) Run-on and run-off control system					
F-2b(7)(b) Wind dispersal control system					
F-2b(8) Miscellaneous unit inspections	↓	↓			
F-3 Waiver or documentation of preparedness and prevention requirements	NA	NA			Sec. F p. F-11 → F-17
F-3a Equipment requirements					
F-3a(1) Internal communications	Y	Y			" p. F-11 + F-12
F-3a(2) External communications	Y	Y			" p. F-12 + F-13
F-3a(3) Emergency equipment	N	N	#16		" p. F-13 → F-15
F-3a(4) Water for fire control	Y	Y			" p. F-15 + F-16
F-3b Aisle space requirement	Y	Y			" p. F-16 + F-17

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

		Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
F-4	Preventive procedures, structures, and equipment					<u>Sec. F-4 p. F-18 → F-21</u> VOL 5
F-4a	Unloading operations	<u>Y</u>	<u>Y</u>			<u>" p. F-18</u>
F-4b	Run-off	<u>Y</u>	<u>Y</u>			<u>" p. F-19 + F-20</u>
F-4c	Water supplies	<u>Y</u>	<u>Y</u>			<u>" p. F-20</u>
F-4d	Equipment and power failure	<u>Y</u>	<u>Y</u>			<u>" p. F-20 + F-21</u>
F-4e	Personnel protection equip- ment	<u>Y</u>	<u>Y</u>			<u>" p. F-21</u>
F-5	Prevention of reaction of ignitable, reactive, and incompatible wastes					<u>Sec. F-5 p. F-22 → F-27</u>
F-5a	Precautions to prevent igni- tion or reaction of ignitable or reactive wastes	<u>Y</u>	<u>Y</u>			<u>" p. F-22 → F-24</u>
F-5b	General precautions for handling ignitable or reac- tive waste and mixing of incompatible waste	<u>N</u>	<u>N</u>	<u>#17</u>		<u>" p. F-24</u>
F-5c	Management of ignitable or reactive wastes in con- tainers	<u>Y</u>	<u>Y</u>			<u>" p. F-25</u>
F-5d	Management of incompatible wastes in containers	<u>Y</u>	<u>Y</u>			<u>" p. F-25 + F-26</u>
F-5e	Management of ignitable or reactive wastes in tank systems	<u>NA</u>	<u>NA</u>			
F-5f	Management of incompatible wastes in tanks systems	<u>NA</u>	<u>NA</u>			
F-5g	Management of ignitable or reactive wastes placed in waste piles	<u>NA</u>	<u>NA</u>			

COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

		Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
F-5h	Management of incompatible wastes placed in waste piles	NA	NA			
F-5i	Management of ignitable or reactive wastes placed in surface impoundments					
F-5j	Management of incompatible wastes placed in surface impoundments					
F-5k	Management of ignitable or reactive wastes placed in landfills					
F-5l	Management of incompatible wastes placed in landfills					
F-5m	Management of ignitable or reactive wastes placed in land treatment units					
F-5n	Management of incompatible wastes placed in land treatment units					

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

G. CONTINGENCY PLAN

		Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
G-1	General information	<u>N</u>	<u>N</u>	<u>#18</u>		<u>Sec. G-1 p. G-1 → G-7</u>
G-2	Emergency coordinators	<u>N</u>	<u>N</u>	<u>#19</u>		<u>" G-2 p. G-8 → G-10</u>
G-3	Implementation	<u>N</u>	<u>N</u>	<u>#20</u>		<u>" G-3 p. G-11 + G-12</u>
G-4	Emergency response procedures					<u>" G-4 p. G-13 → G-30</u>
G-4a	Notification	<u>N</u>	<u>N</u>	<u>#21</u>		<u>" p. G-13 → G-16</u>
G-4b	Identification of hazardous materials	<u>N</u>	<u>N</u>	<u>#22</u>		<u>" p. G-16 + G-17</u>
G-4c	Assessment	<u>Y</u>	<u>Y</u>			<u>" p. G-17 → G-20</u>
G-4d	Control procedures	<u>Y</u>	<u>Y</u>			<u>" p. G-20 → G-23</u>
G-4e	Prevention of recurrence or spread of fires, explosions, or releases	<u>N</u>	<u>N</u>	<u>#23</u>		<u>" p. G-24</u>
G-4f	Storage and treatment of released material	<u>Y</u>	<u>Y</u>			<u>" p. G-24</u>
G-4g	Incompatible waste	<u>N</u>	<u>N</u>	<u>#24</u>		<u>" p. G-24 + G-25</u>
G-4h	Post-emergency equipment maintenance	<u>N</u>	<u>N</u>	<u>#25</u>		<u>" p. G-25</u>
G-4i	Container spills and leakage	<u>N</u>	<u>N</u>	<u>#26</u>		<u>" p. G-25</u>
G-4j	Tank spills and leakage					<u>" p. G-26 → G-28</u>
G-4j(1)	Stopping waste addition	<u>N</u>	<u>N</u>	<u>#27</u>		<u>" p. G-26</u>
G-4j(2)	Removing waste	<u>N</u>	<u>N</u>	<u>#28</u>		<u>" p. G-26</u>
G-4j(3)	Containment of visible releases	<u>Y</u>	<u>Y</u>			<u>" p. G-26</u>
G-4j(4)	Notifications; reports	<u>N</u>	<u>N</u>	<u>#29</u>		<u>" p. G-27</u>

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

		Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
G-4j(5)	Provision of secondary containment, repair or closure	<u>N</u>	<u>N</u>	<u>#30</u>		" p. G-27 + G-28
G-4k	Surface impoundments spills and leakage					" p. G-28 → G-30
G-4k(1)	Emergency repairs	<u>N</u>	<u>N</u>	<u>#31</u>		" p. G-28
G-4k(1)(a)	Stopping waste addition	<u>N</u>	<u>N</u>	<u>#32</u>		" p. G-29
G-4k(1)(b)	Containing leaks	<u>N</u>	<u>N</u>	<u>#33</u>		" p. G-29
G-4k(1)(c)	Stopping leaks	<u>N</u>	<u>N</u>	<u>#34</u>		" p. G-29
G-4k(1)(d)	Preventing catastrophic failure	<u>N</u>	<u>N</u>	<u>#35</u>		" p. G-29
G-4k(1)(e)	Emptying the impoundment	<u>N</u>	<u>N</u>	<u>#36</u>		" p. G-29
G-4k(2)	Certification	<u>Y</u>	<u>Y</u>			" p. G-30
G-4k(3)	Repairs as a result of sudden drop	<u>N</u>	<u>N</u>	<u>#37</u>		" p. G-30
G-4k(3)(a)	Existing portions of surface impoundment	<u>N</u>	<u>N</u>	<u>#38</u>		" p. G-30
G-4k(3)(b)	Other portions of surface impoundment	<u>N</u>	<u>N</u>	<u>#39</u>		" p. G-30
G-5	Emergency equipment	<u>N</u>	<u>N</u>	<u>#40</u>		Sec. G-5 p. G-31 → G-47
G-6	Coordination agreements	<u>N</u>	<u>N</u>	<u>#41</u>		" G-6 p. G-48
G-7	Evacuation plan	<u>N</u>	<u>N</u>	<u>#42</u>		" G-7 p. G-49 + G-50
G-8	Required reports	<u>N</u>	<u>N</u>	<u>#43</u>		" G-8 p. G-50 + G-51

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

H. PERSONNEL TRAINING

		Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
H-1	Outline of the training program	<u>N</u>	<u>N</u>	<u>#44</u>	—	<u>Sec. H-1 p. H-2 → H-11</u>
H-1a	Job title/job description	<u>Y</u>	<u>Y</u>	—	—	<u>" p. H-3 → H-5</u>
H-1b	Training content, frequency, and techniques	<u>Y</u>	<u>Y</u>	—	—	<u>" p. H-5 + H-6</u>
H-1c	Training director	<u>N</u>	<u>N</u>	<u>#45</u>	—	<u>" p. H-7</u>
H-1d	Relevance of training to job position	<u>Y</u>	<u>Y</u>	—	—	<u>" p. H-7 → H-9</u>
H-1e	Training for emergency response	<u>Y</u>	<u>Y</u>	—	—	<u>" p. H-9 → H-11</u>
H-2	Implementation of training program	<u>Y</u>	<u>Y</u>	—	—	<u>Sec. H-2 p. H-12 + H-13</u>

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

* FACILITY IS
FEDERALLY OWNED
AND A CERCLA SITE

I. CLOSURE PLANS, POST-CLOSURE PLANS
AND FINANCIAL REQUIREMENTS

	Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
					Sec. I p. I-1 → I-63
I-1 Closure plans	Y	Y			Sec. I-1 p. I-1 → I-61
I-1a Closure performance standard	Y	Y			" p. I-3 → I-5
I-1b Partial closure and final closure activities	Y	Y			" p. I-5 + I-6
I-1c Maximum waste inventory	Y	Y			" p. I-6
I-1d Schedule for closure	Y	Y			" p. I-6 → I-8
I-1d(1) Time allowed for closure	Y	Y			" p. I-8
I-1d(1)(a) Extension for closure time	Y	Y			" p. I-8 + I-9
I-1e Closure procedures	N	N	H		" p. I-9
I-1e(1) Inventory removal	Y	Y			" p. I-9 + I-10
I-1e(2) Disposal or decontamination of equipment, structures and soils	N	N	#4/6		" p. I-10 → I-16
I-1e(3) Closure of disposal units/contingent closures	NA	NA			
I-1e(3)(a) Disposal impoundments					
I-1e(3)(a)(i) Elimination of liquids					
I-1e(3)(a)(ii) Waste stabilization					
I-1e(3)(b) Cover design					
I-1e(3)(c) Minimization of liquid migration					
I-1e(3)(d) Maintenance needs					
I-1e(3)(e) Drainage and erosion	✓	✓			

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

	Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
I-1e(3)(f) Settlement and subsidence	NA	NA			
I-1e(3)(g) Cover permeability	↓	↓			
I-1e(3)(h) Freeze/thaw effects	↓	↓			
I-1e(4) Closure of containers	✓	✓	#47		Sec. I-1 p. I-16 → I-60
I-1e(5) Closure of tanks	NA	NA			
I-1e(6) Closure of waste piles					
I-1e(7) Closure of surface impoundments					
I-1e(8) Closure of incinerators					
I-1e(9) Closure of landfills					
I-1e(10) Closure of land treatment facilities					
I-1e (10)(a) Continuance of treatment					
I-1e (10)(b) Vegetative cover					
I-1e(11) Closure of miscellaneous units	↓	↓			
I-2 Post-closure plan/contingent post-closure	NA	NA			Sec. I-2 p. I-62
I-2a Inspection plan					
I-2b Monitoring plan					
I-2c Maintenance plan					
I-2d Land treatment					
I-2e Miscellaneous units					
I-2f Post-closure security	↓	↓			

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

		Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
I-2g	Post-closure contact	NA	NA			
I-3	Notices required for disposal facilities	NA	NA			
I-3a	Certification of closure	NA	NA			
I-3b	Survey plat	NA	NA			
I-3c	Post-closure certification	NA	NA			
I-3d	Post-closure notices	NA	NA			
I-4	Closure cost estimate	Y	Y			Sec. I-4 p. I-62
I-5	Financial assurance mechanism for closure	Y	Y			Sec. I-5 p. I-62
I-5a	Closure trust fund	NA	NA			
I-5b	Surety bond					
I-5b(1)	Surety bond guaranteeing payment into a closure trust fund					
I-5b(2)	Surety bond guaranteeing performance of closure					
I-5c	Closure letter of credit					
I-5d	Closure insurance					
I-5e	Financial test and corporate guarantee for closure					
I-5f	Use of multiple financial mechanisms					
I-5g	Use of financial mechanism for multiple facilities	✓	✓			
I-6	Post-closure cost estimate	NA	NA			Sec. I-6 p. I-63

COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

		Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information.
I-7	Financial assurance mechanism for post-closure care	NA	NA			Sec. I-7 p. I-63
I-7a	Post-closure trust fund					
I-7b	Surety bond					
I-7b(1)	Surety bond guaranteeing payment into a post-closure trust fund					
I-7b(2)	Surety bond guaranteeing performance of post-closure care					
I-7c	Post-closure letter of credit					
I-7d	Post-closure insurance					
I-7e	Financial test and corporate guarantee for post-closure care					
I-7f	Use of multiple financial mechanisms					
I-7g	Use of a financial mechanism for multiple facilities	✓	✓			
I-8	Liability requirements	Y	Y			Sec. I-8 p. I-63
I-8a	Coverage for sudden accidental occurrences					
I-8a(1)	Endorsement of certification	NA	NA			
I-8a(2)	Financial test or corporate guarantee for liability coverage	✓	✓			

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

		Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information
I-8a(3)	Use of multiple insurance mechanisms	NA	NA	—	—	—
I-8b	Coverage for nonsudden accidental occurrences	↓	↓	—	—	—
I-8b(1)	Endorsement or certification	—	—	—	—	—
I-8b(2)	Financial test or corporate guarantee for liability coverage	—	—	—	—	—
I-8b(3)	Use of multiple insurance mechanisms	—	—	—	—	—
I-8c	Request for variance	↓	↓	—	—	—
I-9	State mechanisms	Y	Y	—	—	Sec. I-9 p. I-63
I-9a	Use of state-required mechanism	NA	NA	—	—	—
I-9b	State assumption of responsibility	↓	↓	—	—	—

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COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

		Complete (Y/N)	Technically Adequate (Y/N)	See Attached Comment	See Attached Exhibit	Location of Information	
J. CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS							
J-1	Solid waste management units	NR	NR				VOL 9 → 12
J-1a	Characterize the solid waste management unit						
J-1b	No solid waste management units						
J-2	Releases						
J-2a	Characterize releases						
J-2b	No releases						
K. OTHER FEDERAL LAWS		Y	Y			Sec. K p. K-1 + K-2	VOL 13
L. PART B CERTIFICATION		Y	Y			Sec. L	VOL 13